

Industrial Networks Education

Diagnostics & Optimization of Industrial Wireless LAN

General Information

Course Code: IEN-IKWLANADV
Length: 2 Days

Audience

This course is for users who are involved with developing or sustaining automation networks in an industrial environment. This includes, but is not limited to the following:

- Plant Engineers
- Control Engineers
- System Engineers
- Commission Engineers
- Application Engineers
- Operations or IT Network Engineers
- Facility Managers
- Project Engineers

Prerequisites

- Knowledge in accordance with the Wireless LAN in Industrial Networks” course (IEN-IKWLAN1A).
- Familiar with network topologies, transfer processes, addressing, data transport, and understand the associated technical vocabulary.
- Familiar with the principles of router operations, switches and an OSI reference model.

Profile

This course is one of four advanced level courses, available for engineers wanting to obtain the Expert Level designation of Siemens Certified Expert for Industrial Networks (CEIN).

This course covers techniques and methods for diagnosing industrial wireless networks, as well as eliminating interference and error sources.

Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting. The course uses a hands-on model for realistic demonstrations.

Objectives

Upon completion of this course, the student will learn:

- Introduction to a holistic diagnostics approach
- Overview or refresher of technical terminology
- To prepare and survey physical structures
- Introduction to wireless field diagnostics
- Procedure for device diagnostics
- Introduction to network diagnostics
- Comprehensive exercises using the SCALANCE W product line
- Become familiar with the tools and parameters that can be adapted to ensure the required performance of the network.
- How to properly assess wireless signals.

Topics

1. Introduction
2. First steps
3. Antenna technology
4. RF Diagnostics
5. Device Diagnostics
6. Network Diagnostics
7. Case study